Final
Programmatic Environmental Assessment

for

Application by the Eastern New York Chapter of The Nature Conservancy
for a Safe Harbor Agreement and Associated Permit
for the Karner blue butterfly (*Lycaeides melissa samuelis*)
in New York State

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April 2010

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1.0 Introduction

On October 4, 2005, the Eastern New York Chapter of The Nature Conservancy (TNC) submitted an application for an Enhancement of Survival Permit (ESP) and Safe Harbor Agreement/Candidate Conservation Agreement with Assurances under Section 10(a)(1)(A) of the Endangered Species Act (ESA) to Region 5 of the U.S. Fish and Wildlife Service (Service). Subsequently, the Service and TNC modified their agreement and removed the Candidate Conservation Agreement with Assurances portion as the species under consideration (Karner blue butterfly and frosted elfin) use the same habitat, but the standards are different for the two programs. The Safe Harbor Agreement (SHA) is intended to promote the conservation of the Federally- and State-listed endangered Karner blue butterfly (*Lycaides melissa samuelis*) through restoration, creation, enhancement, and management of its habitat on non-Federal land in eastern New York.

Under the auspices of State law, the SHA will accomplish the same goals and provide similar benefits to the State-listed threatened frosted elfin (*Callophrys irus*) and State-listed endangered Persius duskywing (*Erynnis persius*). The latter species, presumed extirpated from New York since the mid-1980s, was documented in the project area in 2008. Should the frosted elfin and/or Persius duskywing be listed under the ESA in the future, TNC may request an amendment to the SHA and ESP to include the frosted elfin and/or Persius duskywing, including any baseline conditions established under prior agreements with cooperating landowners.

The SHA specifically covers non-Federal (and non-TNC) lands within one of the priority recovery action areas within New York State as discussed in the Karner Blue Butterfly Recovery Plan (Recovery Plan) (Service 2003) – the Glacial Lake Albany Recovery Unit, which includes portions of Albany, Saratoga, Schenectady, and Warren Counties (Figure 1, Figure B-2 Service 2003). The SHA has been prepared by the Service, TNC, and the New York State Department of Environmental Conservation (NYSDEC). Under the SHA, TNC will hold the ESP and enroll non-Federal landowners through binding contracts memorialized as cooperative agreements. Enrollees will implement conservation measures to benefit the Karner blue butterfly and frosted elfin. In return, these property owners will receive regulatory assurances that the Service will allow the "incidental take" of Karner blue butterflies (and frosted elfin and/or Persius duskywing should they become listed in the future and TNC requests an amendment to the SHA and ESP) associated with their implementation of specified management activities and/or their lawful use of the enrolled property after the specified management activities identified have been initiated. The cooperating agency, NYSDEC, is also expected to sign the SHA as a commitment to allow the incidental take of the three species consistent with New York State rules and regulations. The NYSDEC will also provide technical expertise to assist with implementation of the provisions of the SHA. The SHA is incorporated here by reference.

Figure B-2 Karner blue butterfly recovery units in Massachusetts, New Hampshire and New York.

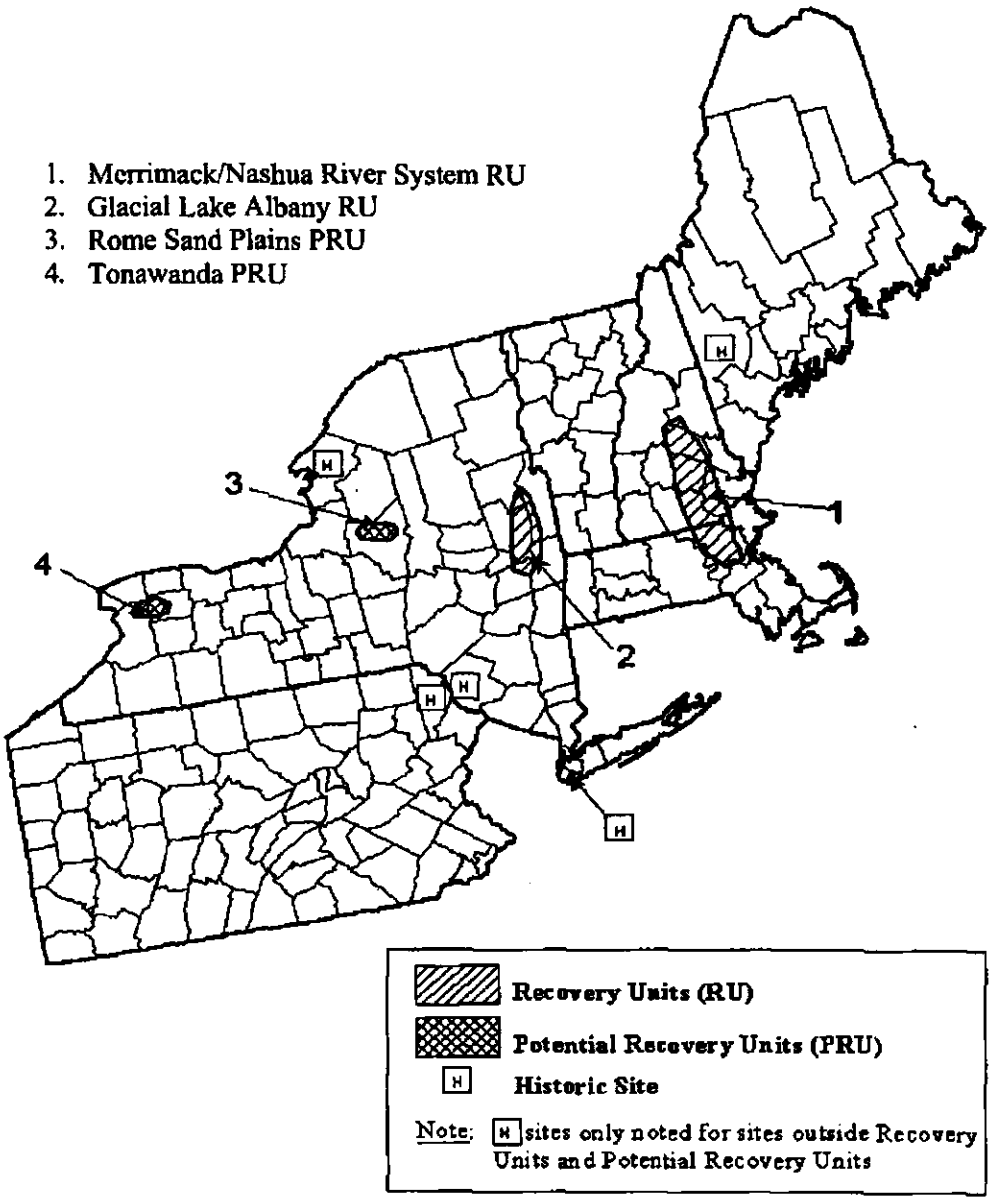

Figure 1. Karner blue butterfly recovery units and potential recovery units in New York and New England (Appendix B-11, Service 2003).

2.0 Purpose and Need for Taking Action

2.1 Purpose

The purpose of this environmental assessment (EA) is to evaluate the direct, indirect, and cumulative environmental effects of issuing an ESP and anticipate future effects of implementation of the SHA. The ultimate goal of the Service's actions is to recover populations of the Karner blue butterfly to the point where protections under the ESA are no longer necessary. Given that Karner blue butterflies, frosted elfin, and Persius duskywing face similar threats and have similar habitat requirements, the SHA provides collateral benefits to frosted elfins and Persius duskywing which are listed as threatened and endangered, respectively, by the State of New York.

2.2 Need

The primary need for the proposed SHA is to allow for implementation of a suite of conservation measures to secure and expand populations of the Karner blue butterfly and, incidentally, the frosted elfin and Persius duskywing in eastern New York. The secondary need is to provide participating non-Federal landowners, in return for their cooperation with implementation of conservation measures on their properties, with regulatory assurances and limited exemption from incidental take of Karner blue butterflies, as well as the frosted elfin and Persius duskywing should they become listed in the future under the ESA.

2.3 Decisions that Need to be Made

The Service's Regional Director will select one of the alternatives analyzed in detail and will determine, based on the facts and recommendations contained herein, whether this EA is adequate to support a Finding of No Significant Impact decision, or whether an Environmental Impact Statement will need to be prepared.

2.4 Background

2.4.1 Karner Blue Butterfly

The Karner blue butterfly has a global status of G5T2 (imperiled) and a status of S1 in the State of New York (NatureServe 2006). The State of New York listed the species as endangered in 1977. The Karner blue butterfly was listed as an endangered species under the ESA on December 14, 1992 (57 FR 59236). The ultimate goal of the ESA is the conservation of endangered and threatened species and the ecosystems upon which they depend. The Service finalized a recovery plan for the Karner blue butterfly in September 2003. The Karner blue butterfly is closely tied to its habitat, as the sole source of food for larvae is wild blue lupine (*Lupinus perennis*) leaves. The Karner blue butterfly is bivoltine (completes two generations per year). The first flight is generally in late May into June and the second flight is generally in July. Karner blue butterflies overwinter in the egg stage at the base of lupine plants and/or on nearby grasses. They are generally short-distance fliers with tight associations to lupine patches and

nectar resources. See the Final Recovery Plan (Service 2003) for a full discussion of Karner blue butterfly life history requirements.

The Recovery Plan designates the area between Glens Falls/Queensbury and the Albany Pine Bush as the Glacial Lake Albany Recovery Unit (GLA). A Recovery Unit is a management sub-unit of the listed entity, geographically or otherwise identifiable, that is essential to the recovery of the entire listed entity and conserves genetic or demographic robustness, important life history stages, or other feature for long-term sustainability of the entire listed entity. For the Karner blue butterfly, recovery units are designed to ensure the long-term sustainability across the species range (Service 2003). Within the GLA, three viable populations of Karner blue butterflies are required for the species to be downlisted to threatened or delisted from the Endangered Species List. Karner blue butterflies are known to occur within four counties within the GLA (Albany, Saratoga, Schenectady, and Warren). However, not all areas within these counties are suitable for habitat restoration. Restoration work will be focused in the zone of sand deposits created by glacial melt water streams and rivers which flowed into Glacial Lake Albany. Therefore, when we refer to the GLA throughout the rest of this EA, we generally mean these sand-deposit areas.

While population estimates have not occurred for Karner blue butterflies in New York, the NYSDEC and its partners monitor every site (where access is granted) in the State throughout both flights. Peak counts are used as indices of Karner blue butterfly abundance at each site to compare counts over time. However, given our current understanding of Karner blue butterflies (*e.g.*, peak counts, available habitat, threats at sites), populations in New York do not meet "viable population" criteria (p. 55, Service 2003). Threats to Karner blue butterflies in New York include habitat degradation (through invasive species introduction and lack of habitat management), destruction, and fragmentation resulting in isolated patches of habitat across the GLA. Karner blue butterflies at small sites in the GLA appear less able to withstand weather events such as drought, heavy rain, or extreme temperatures (Margolis 1999).

2.4.2 Frosted Elfin

The frosted elfin has a global status of G3 (vulnerable) and a status of S1S3 in the State of New York (NatureServe 2006). Although not considered for listing under the ESA to date, the frosted elfin was listed as threatened by the State of New York in 1999. NatureServe (2006) states the global long-term trend for the species shows very large to substantial declines (decline of 50 to >90%) and the global short-term trend is rapidly declining (decline of 10 to 50%).

Frosted elfin are similar to Karner blue butterflies in that they are closely tied to their habitats. There are two ecotypes or (unlikely) sibling species of frosted elfin (NatureServe 2006). One feeds on wild blue lupine flowers and developing pods and, if necessary, leaves in the last instar; the other feeds on young leaves of wild indigo (*Baptisia tinctoria*) or occasionally on other species of *Baptisia*. The SHA focuses on providing habitat for frosted elfin associated with wild blue lupine. In New York, frosted elfins associated with wild blue lupine occur in Albany, Oneida, Saratoga, Schenectady, and Warren Counties and those associated with wild indigo occur in Suffolk County. Frosted elfin are univoltine. In New York, adults fly in late April to

early June. Frosted elfin overwinter as pupae just below the soil surface at the base of wild blue lupine plants. Threats to frosted elfin are similar to those of the Karner blue butterfly.

2.4.3 Persius Duskywing

Persius duskywing were not considered in the 2007 draft EA, as they were considered extirpated in New York at that time. In 2008, however, one site in Saratoga County was confirmed to contain Persius duskywing. Positive identification of this species is very difficult, requiring dissection and comparison of male genitalia under a microscope (NatureServe 2009, Shepherd 2005). Given that that they may occur at other GLA Karner blue butterfly and frosted elfin sites (probably at very low numbers), we determined that we should evaluate the potential for impacts to this species.

Although not considered for listing under the ESA to date, the Persius duskywing was listed as endangered by the State of New York in 1999. The global long-term trend for the species is characterized as large to substantial declines (decline of 50 to 90%) and the global short-term trend is stable. The taxon listed by the State of New York is the full species *Erynnis persius*, but several authorities (*e.g.*, NatureServe, Xerces Society) recognize four described subspecies, including the Eastern Persius duskywing (*Erynnis persius persius*) which is found in New York. NatureServe (2009) assigns a global status of G5T1T3 (secure species, but vulnerable to critically imperiled subspecies) and a status of SH in the State of New York.

Persius duskywing are similar to Karner blue and frosted elfin butterflies in that they are closely tied to their habitats. Larval foodplants include leaves of wild blue lupine and wild indigo. In New York, Persius duskywings associated with wild blue lupine occur in at least one location in Saratoga County and those associated with wild indigo occurred historically in Suffolk County. The SHA focuses on providing habitat for Persius duskywing associated with wild blue lupine.

Persius duskywing are univoltine. In New York, adults fly from late April to early June, lay eggs singly on the underside of hostplant leaves and overwinter as larvae. Threats to Persius duskywing are similar to those of the Karner blue and frosted elfin butterfly.

2.4.4 Recovery Strategy

The Service's Karner blue butterfly recovery strategy is to maintain extant populations throughout its geographic range and improve and stabilize populations where it is currently imperiled (p. 52, Service 2003). We anticipate that this strategy will also provide significant benefits to the frosted elfin and perhaps, depending on its abundance and distribution, Persius duskywing. As discussed above, the Service established recovery units to ensure recovery of the Karner blue butterfly range-wide. Throughout the range, we are relying in part on Federal and State lands to conserve the Karner blue butterfly and its habitat. In New York, the majority of habitat restoration and management has occurred on State, local government, and private lands (*e.g.*, TNC). Due to the current ownership of lands in the GLA, we need cooperation from other interested landowners to assist with our efforts and expand the amount of habitat that is currently available for use by the Karner blue butterfly, frosted elfin, and Persius duskywing. Through implementation of this SHA, we anticipate restoring and managing habitat through mowing, tree

clearing and grubbing, removal of debris (*e.g.*, trash, gravel, yard waste), prescribed burning, limited use of herbicides, and planting (lupine and nectar species) seeds or seedlings by hand or mechanical equipment (*e.g.*, seed drill). While landowner participation may be opportunistic throughout the GLA, our priority is to restore and manage lands adjacent to existing Karner blue butterfly and frosted elfin populations within established potential viable population areas (Queensbury, Saratoga West, Saratoga Sandplains, and Albany Pine Bush) (Figure 2). We believe this will provide the greatest benefit to our extant populations. However, there are some extant sites outside these areas that could similarly benefit from habitat restoration and management; TNC may restore and manage lands in the vicinity of these more isolated sites. In addition, TNC may restore and manage lands even farther from existing populations. Over time, we would expect to connect these sites with occupied habitat through additional restoration actions. We may also assist with recolonization of sites through translocation of frosted elfin, Persius duskywing, and Karner blue butterflies.

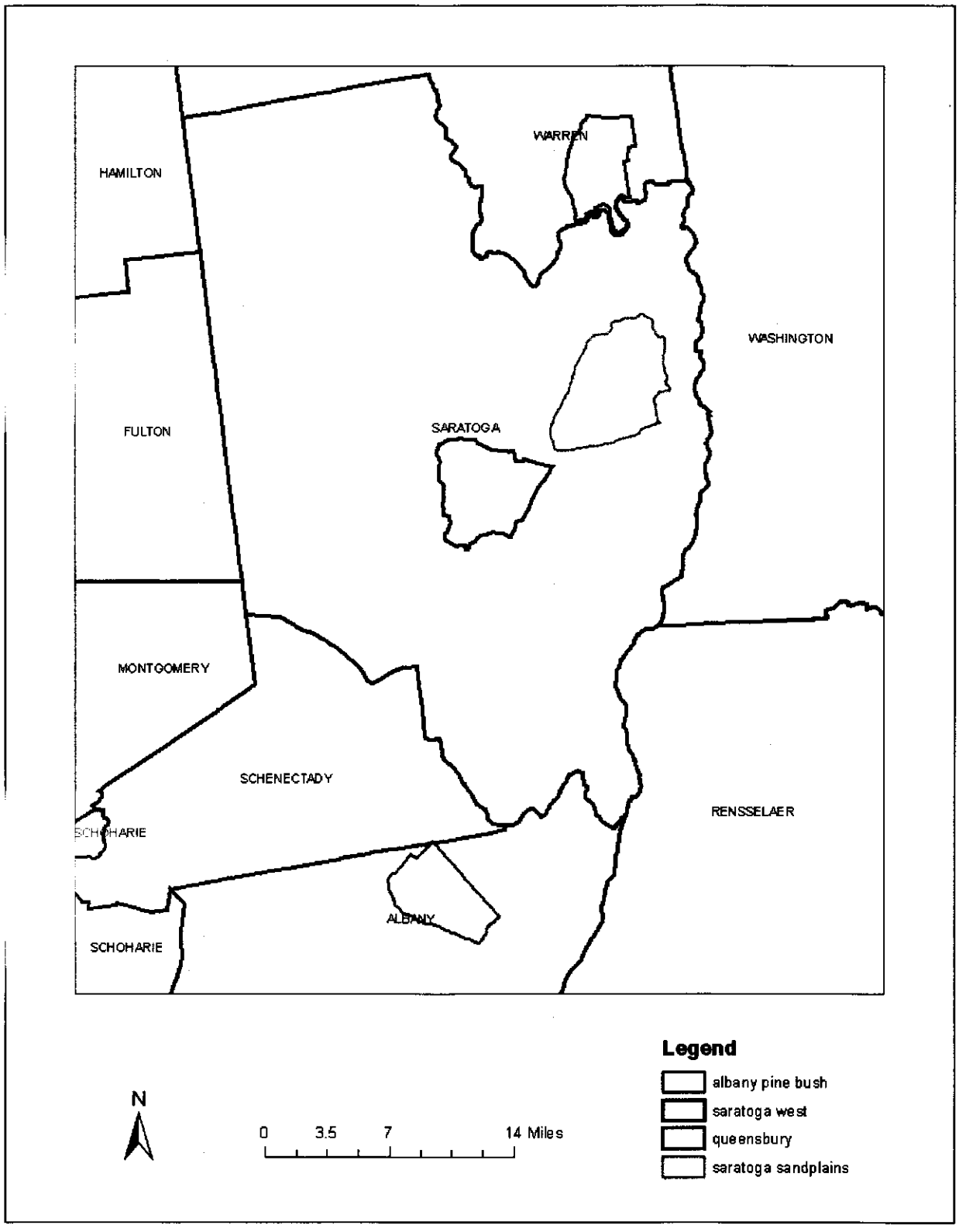

Figure 2. Potential viable population areas within the Glacial Lake Albany Recovery Unit, New York.

3.0 Alternatives, Including the Proposed Action

3.1 Alternatives Not Considered for Detailed Analysis

We considered developing a programmatic SHA with TNC for the GLA as well as two potential recovery units (Rome Sand Plains and Tonawanda) in New York (see Figure 1). Potential recovery units are areas in which the Karner blue butterfly occurred historically or may exist in low numbers and in which sufficient restorable and suitable habitat occurs that potentially could support a viable metapopulation of Karner blue butterflies (Service 2003). The Rome Sand Plains potential recovery unit is located in Oneida County and the Tonawanda potential recovery unit is located in Erie and Genesee Counties. We are unaware of any extant populations of Karner blue butterflies in these areas. However, the frosted elfin is known to occur in the Rome Sand Plains potential recovery unit and may occur in the Tonawanda potential recovery unit. The Eastern New York Chapter of TNC is the cooperator for this project and the potential recovery units are outside the geographic boundary of their focus and responsibilities. In addition, the primary focus of the recovery program for the Karner blue butterflies is the GLA. Therefore, we decided to develop this SHA exclusively for the GLA. Should other TNC chapters wish to participate in this program, we can amend the SHA to include those areas in the future.

3.2 Alternatives Carried Forward for Detailed Analysis

3.2.1 Alternative A - Issue Permit and Implement Programmatic SHA Program Through The Nature Conservancy (Proposed Action)

Under Alternative A, TNC would implement a programmatic SHA program throughout the GLA. Each landowner contract implemented under this Alternative would contain site-specific management plans designed to conserve and/or restore habitat for the Karner blue butterfly, frosted elfin, and Persius duskywing. Management activities for Karner blue butterflies, frosted elfins, and Persius duskywing in the GLA are similar, but differences among enrolled properties (*e.g.*, differences in baseline habitat conditions, the configuration of potential restored habitats, and their juxtaposition with habitats on adjacent properties, compatibility with other land uses) will dictate the site-specific management activities. In most cases, the management activities would be conducted by TNC or their designees, however, landowners may also assist with several of the activities. The suite of management activities available under the SHA include, but are not limited to:

Black locust (*Robinia pseudoacacia*) clone removal - This is generally conducted by heavy machinery. Tree boles are removed using feller bunchers and skidders, stumps are excavated, and roots are raked from the soil using a bulldozer equipped with a root rake followed by light grading to remove tire ruts and prepare the site for restoration plantings. This technique effectively converts closed canopy invasive forest stands to open prairie/savannah capable of supporting Karner blue butterflies.

Selective tree removal - This technique involves selective removal of canopy trees using chainsaws by hand crews and/or mechanical tree felling equipment. Stumps and roots may or

may not be removed using excavators or stump grinders depending on the particular site conditions and restoration goals. This technique effectively thins the canopy, increasing light penetration to the forest floor.

Tree girdling - Tree girdling involves using a hand-held, non-motorized bark-spud to remove a one-foot wide strip of bark from live trees. The technique is most commonly used to control aspen species (*Populus tremuloides* and *P. grandidentata*), but can also be used to effectively control other overstory species. Standing dead trees are generally left on site to decompose naturally. This technique also increases light penetration and creates snags that often support a number of wildlife species, including primary and secondary cavity nesting species.

Herbicide application - Herbicide applications may include localized spot treatments using hand-held foliar applicators (back-pack sprayer, cut stump drip applicators, or wick applicators) or broadcast mechanized applications (ATV, truck/tractor mounted), depending on site conditions and restoration objectives. All herbicide applications follow labeled instructions and applicable State and/or Federal guidelines. Herbicide applications result in decreased undesirable vegetation (overstory, understory, and/or groundcover) and increased cover of plants essential to Karner blue butterfly habitat.

Site grading - Soil grading restores topographic heterogeneity in heavily altered sites (parking lots, old agricultural fields, etc.) and/or to remove tire ruts in order to prepare a site for mechanized seeding.

Restoration planting - All plantings use locally-derived native seed. Similarly, on sites where white pine (*Pinus strobus*) or other native overstory trees are too dense, silvicultural thinnings are followed by native plantings that effectively convert forested stands to a more open oak and pine savannah where grasses and forbs dominate the ground-cover vegetation. Abandoned agricultural fields and paved parking lots are restored to native prairie openings. Depending on the site conditions and restoration objectives, seeding may include broadcast plantings with mechanized seed drills towed behind a tractor or bulldozer, hand-seeding using shoulder harnessed or walk-behind seeders, or non-mechanized hand broadcasting of seeds. Any of these seeding methods may be preceded and/or followed by cultipacking with a tractor and roller to ensure good soil-seed contact.

Mowing - Mowing generally involves mechanized mowing machines (*e.g.*, tractor and brush-hog, hydro-ax) to keep vegetation low in combination with prescribed fire treatments or as a sole vegetation management treatment in shrub-land and grassland-dominated sites or sites where fire management is precluded.

Prescribed fire - In pitch pine scrub oak barrens, fire treatments serve to thin the forest overstory and understory of fire-sensitive tree species such as red maple (*Acer rubrum*) and white pine, and decrease the dominance of aspen species (*P. tremuloides*, *P. grandidentata*, and *P. deltoides*) while increasing fire-dependent plants in the understory. Physically these treatments reduce accumulated litter and duff, increase light levels at the forest floor, increasing native grasses and wildflowers, and flower production. Top-killing fire-sensitive trees and

shrubs also increase standing dead trees to the benefit of primary and secondary cavity nesting birds.

Captive-rearing and translocation of butterflies - To enhance the rate of butterfly colonization of sites, TNC or their designees, the NYSDEC, and the Service may employ captive-rearing and translocation methods. This would involve capturing adult gravid females from a site, bringing them into captivity where they would lay their eggs, and returning the females to their collection site. Eggs would hatch into larvae, pupate, and be released to a site. The NYSDEC and Service would meet annually to develop a captive-rearing and translocation plan to identify sites for collection and release, maximum number of adults that can be collected, etc.

TNC-owned lands will not be covered by the SHA, and any management activities that result in limited "take" of Karner blue butterflies associated with habitat management on its lands will be covered through a separate Section 10(a)(1)(A) enhancement of recovery permit (or a subpermit from the NYSDEC).

Procedures for compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470) and Section 14.09 of the New York State Historic Preservation Act of 1980, described in Appendix B of this EA, will be incorporated in the ESP. These procedures are currently being implemented by TNC's New York Chapter for similar Karner blue butterfly habitat restoration activities funded in whole or part by Service-administered grants (*e.g.*, State Wildlife and Private Stewardship Grants).

3.2.2 Alternative B - Continue Ongoing Conservation Measures Without Issuing Any Permits Associated with SHAs (No Action)

Under Alternative B, TNC would continue its existing habitat restoration and management program using the same techniques as described in Alternative A. The program would be largely limited to TNC-owned land, to a much less degree, any land owned by their partners, or other interested private landowners. The Nature Conservancy would also continue their outreach programs designed to assist with the conservation of the Karner blue butterfly. The NYSDEC would also continue their existing Karner blue butterfly, frosted elfin, and Persius duskywing conservation programs. The Service would assist TNC and the NYSDEC with these efforts whenever possible.

3.2.3 Alternative C - Develop Individual SHAs Directly with Non-Federal Landowners

Under Alternative C, the Service would implement a SHA program throughout the GLA. Each SHA implemented under this Alternative would contain site-specific management plans designed to conserve and/or restore habitat for the Karner blue butterfly using the same techniques as those described in Alternative A. Because Karner blue butterflies (and frosted elfins and Persius duskywing) require similar habitats throughout the GLA, most SHAs would contain similar management activities. Management activities that would likely be implemented as part of a SHA are listed in Section 3.2.1.

4.0 Affected Environment

4.1 Physical Characteristics

Normal seasonal temperatures in the Albany area range from 36-57°F in spring, 58-80°F in summer, 40-60°F in autumn, and 16-34°F in winter. Annual average precipitation is 38.6 inches. Annual average snowfall is 62.9 inches.

4.2 Biological Environment

4.2.1 Habitat/Vegetation

A great variety of landscape types exist within the GLA, including urban centers, suburban residential areas, agricultural fields, etc. Beyond active agricultural uses, a number of common and rare natural communities exist throughout the remaining open space in Glacial Lake Albany. Natural communities tracked by the New York Natural Heritage Program (NYNHP) include a number of communities common throughout upstate New York including successional old field, Appalachian Oak – Pine Forest, northern hardwood, successional southern hardwoods, successional northern hardwood, and red-maple hardwood swamp among others. Less common communities include a number of wetland communities such as sedge-meadow and shallow emergent marsh. Two globally-rare communities, inland pitch pine scrub oak barrens and pine barrens vernal ponds, also exist within Glacial Lake Albany and are the main focus of conservation efforts by TNC and New York State in the GLA. Vegetative communities tracked by the NYNHP and found within the GLA are listed in Appendix A.

Habitats supporting or capable of supporting habitat for the Karner blue butterfly, frosted elfin, and Persius duskywing are generally characterized by very well-drained sandy soils. Historically, habitats that supported Karner blue butterflies, frosted elfins, and Persius duskywing within the GLA included inland pitch pine scrub oak barrens and oak-pine savannahs. These communities are now considerably diminished in size and condition. This has resulted from urban and suburban residential and commercial development, as well as vegetative succession due to a lack of necessary disturbance regimes, including periodic wildland fires.

Communities found within the GLA that are best suited for restoration practices described in the SHA include inland pitch pine scrub oak barrens, oak-pine savannah, tall-grass prairie openings, Appalachian oak pine forest, successional northern hardwood forest, successional southern hardwood forest, successional old fields, and mowed lawns as long as the soils are appropriate. In addition, formerly disturbed sites, such as paved parking lots, have been restored to Karner blue butterfly and frosted elfin habitat.

4.2.2 Federally-listed Threatened and Endangered Species, and Candidate Species

There are no Federal candidate species known to occur within the GLA at this time. In addition to the Karner blue butterfly, the Federally-listed endangered Indiana bat (*Myotis sodalis*) occurs within the GLA. No "critical habitat" has been designated within the GLA.

4.2.2.1 Karner blue butterfly

Karner blue butterflies are known to occur in Albany, Saratoga, Schenectady, and Warren Counties. See Section 2.4.1 for additional information.

4.2.2.2 Indiana bat

There are two known winter hibernacula for Indiana bats in the GLA counties – one in Albany County and one in Warren County. However, both hibernacula are located outside the primary zone of sand deposits. There is a summer record of a male Indiana bat in Albany County; however, there are no summer records of Indiana bats within the GLA to date.

4.2.3 New York State-listed Species

In addition to the State-listed endangered Indiana bat, Karner blue butterfly, and Persius duskywing (Section 2.4.3), and State-listed threatened frosted elfin (Section 2.4.2), there are several other State-listed species that may occur in the vicinity of the GLA.

The following State-listed species are known or have the potential to occur within pine barrens or oak savannah communities in the GLA:

Endangered

Plant

Bayard's adder's-mouth orchid (*Malaxis bayardii*)
Slender Marsh bluegrass (*Poa paludigena*)
Nuttall's tick-trefoil (*Desmodium nuttallii*)
Virginia false gromwell (*Onosmodium virginianum*)
Hooker's orchid (*Platanthera hookeri*)

Threatened

Plant

Mock-pennyroyal (*Hedeoma hispida*)
Clustered sedge (*Carex cumulate*)
Little-leaf tick-trefoil (*Desmodium ciliare*)
Carey's smartweed (*Persicaria careyi*)
Whip nutrush (*Scleria triglomerata*)

Special Concern

Animal

Inland barrens buckmoth (*Hemileuca maia maia*)
Mottled duskywing (*Erynnis martialis*)
Eastern hognose snake (*Heterodon platyrhinos*)
Eastern spadefoot toad (*Scaphiopus holbrookii*)
Spotted turtle (*Clemmys guttata*)
Jefferson salamander (*Ambystoma jeffersonianum*)
Blue-spotted salamander (*Ambystoma laterale*)

Worm snake (*Carphophis amoenus*)
Henry's elfin (*Callophyrs henrici*)
Tawny crescent (*Phycoides batesii batesii*)

4.2.4 Other Natural Communities and Wildlife Species

For a complete list of natural communities found within the GLA, refer to Appendix A. A long list of plant and animal species can be found within these communities. Throughout the sandy soils of the GLA, most plant communities are dominated by oak and pine species and on richer soils are dominated by various eastern deciduous forests. These communities include northern hardwood forest, beech-maple forest, and oak hickory forest. Wildlife common to these communities include a host of bird species such as ruffed grouse, wild turkey, wood thrush, and black-capped chickadees. Common mammals include whitetail deer, red and gray squirrels, cottontail rabbits, coyote, red fox, and gray fox. Snapping turtles, garter snakes, and green frogs are a few of the common reptiles and amphibians found throughout the area (Kricher 1998). Bald eagles, determined in 2007 to no longer require protections of the ESA, but still State-listed as threatened in New York, are known to occur in Albany County along the Hudson River and in Saratoga County along the Sacandaga River. Both of these areas are outside the GLA sand-deposit areas where Karner blue butterfly habitat restoration will occur.

4.3 Land Use

Many Karner blue butterfly and frosted elfin populations occur on protected lands owned by TNC, the NYSDEC, or local municipalities. One documented extant Persius duskywing population occurs on Wilton Wildlife Preserve and Park land and additional populations may occur on protected lands. However, most sites are currently owned by private landowners without commitments to protect and manage the habitat for the butterflies into perpetuity. Common land uses around current Karner blue butterfly, frosted elfin, and Persius duskywing sites include agriculture, forest, commercial, and residential areas.

4.4 Cultural Resources

The GLA area contains historical resources. Evidence has been found of native peoples utilizing natural resources of the GLA as many as 10,000 years ago and European settlers arrived in the area in the 17th Century (Barnes 2003). During this time, the Albany Pine Bush area was established as an important trade route and transportation corridor and later became an important site for glass production. Barnes (2003) highlights the human history of the Albany Pine Bush Area. The northern regions of the GLA are also of historical significance; most notable are important battlegrounds of the American Revolutionary War. In particular, the Saratoga National Historical Park (Park) is maintained by the National Park Service in Saratoga County. First authorized as a New York State site in 1927 on the sesquicentennial of the battles, the Battlefield was made part of the National Park System in 1938 when Saratoga National Historical Park was authorized by the United States Congress. While the Park supports remnant plant communities, including tall grass prairie capable of supporting Karner blue, frosted elfin, and Persius duskywing butterflies, it does not currently support any of these species.

4.5 Public Health and Safety

A number of management strategies may be employed to restore and manage habitat for the two butterfly species, including prescribed fire. Specifically, where fire management is used, smoke produced from controlled burning has the potential to adversely impact visibility along transportation corridors and human health (Hawver 1996). The Albany Pine Bush Preserve (Preserve) area of the GLA is currently the only area of the GLA to utilize prescribed fire management; fire management is a potential land management tool on SHA lands in the Albany area. The Albany Pine Bush Preserve Commission (APBPC) implemented a prescribed fire program in 1991 to restore and maintain globally-rare inland pitch pine scrub oak barrens and Karner blue butterfly habitat. To date more than 1,000 Preserve acres have been treated with prescribed fire. The fire management program is part of an overall management plan for the Preserve and is described in detail in the 2002 Management Plan and Final Environmental Impact Statement for the Albany Pine Bush Preserve (APBPC 2002). This plan was prepared and evaluated consistent with the New York State Environmental Quality Review Act (6 NYCRR Part 617), including extensive public review and comment, and was unanimously adopted by all members of the APBPC. Similar methodologies used on APBPC lands will be used for any prescribed fires on SHA lands.

Understanding the potential for public health and safety impacts posed by prescribed fire activities in the Preserve and methods of mitigating such risks have been evaluated by the APBPC (Hawver 1996, APBPC 2002). According to the April 2002 [NY] State Environmental Quality Review Findings Statement for the 2002 Management Plan and FEIS:

> "Ecological restoration and management as proposed in the 2002 Plan will serve to enhance public health, safety and welfare by reducing potential for uncontrolled fires by maintaining low fuel loads, by providing easier access to control wildfire, [and] by preventing undergrowth from becoming too dense... ."

Considerable efforts are taken to reduce potential impacts of controlled burning, including an extensive public notification process prior to and the day of conducting controlled burning operations, as well as controlling when, where, and how controlled burns are conducted so that fire and smoke are not likely to impact smoke-sensitive areas and/or people. Information regarding the burns and a questionnaire used to identify individuals potentially sensitive to smoke are mailed to all residents and businesses located within an approximate ¼-mile radius of the burn sites. Known sensitive individuals are called on each day of a burn to notify them of the burn. An informational meeting is held annually and flyers are distributed one month prior to the burn season to notify all Preserve neighbors near the burn sites of the anticipated timing of the burns (the burn window). Press releases are also provided to major newspapers and television and radio stations. The APBPC uses New York State Department of Transportation-approved signage for roadways and utilizes digital variable message signs along Interstate 90 notifying drivers of on-going controlled burns and instructing them to drive cautiously in case of smoke. Local and State police and all local fire departments are notified one month prior to conducting controlled burns and of the specific locations being managed on the day of every burn.

Careful attention to the fundamentals of prescribed burning also serves to minimize adverse impacts of fire on human health and safety. These include: 1) selecting burn prescriptions that predict behavior for a fire to assure it can be controlled; 2) designing burn size and shape to aid in the ability to control the fire; 3) designing ignition patterns to ensure that fire behavior can be controlled to reduce potential smoke hazards; 4) burning large areas as smaller units in highly sensitive areas so that small, quickly dispersed puffs of smoke will be generated instead of large continual amounts; 5) ensuring proper equipment and experienced personnel are available to control the fire and respond to changing conditions if necessary; 6) ensuring proper monitoring of fire behavior, weather, and smoke dispersal during a fire so that, if necessary, adjustments can be made to reduce potential impacts on people; and 7) bordering all fire units by wide firebreaks to prevent fire damage to surrounding areas (Hawver 1996).

To respond to controlled burns that may escape, a wildfire contingency plan has been prepared and is outlined in the Fire Management Plan. Radios and cellular phones are at the burn site and the burn crew has direct contact with local police and fire dispatch for rapid communication. Equipment at the site of the burns is available for fire suppression should this be necessary.

> "Discussions with individuals, results from post-burn questionnaires and general observations made during the burns indicate that fire can be used without adversely impacting the surrounding community, especially if adequate buffer areas are available. In general, the benefits of fire management, particularly the ecological benefits and reduced likelihood of catastrophic wildfire outweigh the minimal impacts that controlled fires may have on the local public" (APBPC 2002).

None of the other actions associated with Karner blue butterfly habitat restoration and management are anticipated to have any impact on human health or safety. This includes herbicide application that would be accomplished by certified pesticide applicators and employ widely-used herbicides such as Roundup, Rodeo, and Garlon 3A/4.

4.6 Local Socio-economic Conditions

The proposed action will take place on the properties of voluntary cooperators dispersed across four New York counties.

5.0 Environmental Consequences

We anticipate similar environmental consequences regardless of which alternative is selected. However, we anticipate that the proposed action will facilitate wider and faster implementation of Karner blue butterfly habitat restoration, with more attendant effects, than Alternative C, and the most limited implementation and effects under Alternative B.

5.1 Physical Impacts

Restoration and management activities that may be used at various sites in the GLA include whole tree removal of non-native invasive black locust or selective tree thinning of dense stands of trees; tree girdling; limited herbicide application; site grading; planting wild blue lupine,

native grasses, and nectar plants; mowing; and prescribed burning. Each of these methods serve to restore and/or manage inland pitch pine scrub oak barrens and oak-pine savannah cover types and involve some degree of physical disturbance. Limited disturbance is likely from tree girdling, selective tree thinning, herbicide application, and planting activities. However, greater impacts may be anticipated from the heavy machinery used for black locust removal, site grading, and mowing, and from prescribed burning. For further description of the activities, see Section 3.2.1. All physical impacts are anticipated to be geographically localized and limited in duration, but are likely to occur sooner and encompass more acreage under Alternative A and to occur the most slowly and on the least acreage under Alternative B.

5.2 Biological Resources

The above-described management activities and their changes to the landscape will result in changes to the vegetation and wildlife as further described below. In many cases, activities associated with the Proposed Action will shift forests to a more open canopy condition with an understory dominated by shrubs, grasses, and wildflowers.

Although bald eagles are known within the vicinity of the GLA, no nest or winter roost sites are known within priority restoration areas. Therefore, we anticipate no effects to bald eagles from activities conducted under any alternatives considered in this EA. In the unlikely event that bald eagles are discovered in a project area, close coordination among TNC, NYSDEC, NYNHP, and the Service will facilitate prompt identification of the need for any protections and for compliance with Federal and State laws.

We anticipate a reduction in common northern hardwood forest and roadside disturbance plant species and a commensurate increase in pitch pine scrub oak barrens, oak-pine savannahs, and tall grass prairie openings. For example, silvicultural treatments in black locust stands eliminate this species and the habitat it provides to other plants and animals. Beachy (2002) found that two bird species – red-eyed vireo (*Vireo olivaceus*) and rose-breasted grosbeak (*Pheucticus ludovicianus*) – typical of closed canopy hardwood forests were significantly more abundant in invasive southern hardwood forests in the Preserve, compared to uninvaded pitch pine scrub oak barrens. Within recent decades, however, habitat for such species has significantly increased across upstate New York (Smith et al. 1993) while early successional open grassland and shrub-land habitats, like those capable of supporting Karner blue, frosted elfin, and Persius duskywing butterflies, have declined (DeGraaf and Yamasaki 2003, Dettmers 2003, Thompson and DeGraaf 2001).

Beachy (2002) found a variety of migratory birds within both black locust/aspen invaded sites and uninvaded sites within the Preserve. However, six species were significantly more prevalent at uninvaded sites – Eastern towhee (*Pipilo erythrophthalmus*), house wren (*Troglodytes aedon*), field sparrow (*Spizella pusilla*), prairie warbler (*Dendroica discolor*), red-breasted nuthatch (*Sitta canadensis*), and pine warbler (*Spizella passerina*). According to breeding bird survey data, two of these species, Eastern towhee and field sparrow, have experienced declines of ≥2% per year from 1966 to 2001 in the northeast (Sauer et al. 2002).

Overall, management activities are anticipated to result in a net gain in habitat for migratory birds, including the above-listed species that are increasingly becoming rare in the northeast. We anticipate limited short-term impacts to shrubland nesting birds (*e.g.*, brown thrasher [*Toxostoma rufum*]) during clearing of non-native shrubs. However, native shrub species will replace these and provide future nesting habitat. We anticipate no direct impacts to nesting tree bird species as all tree clearing will be conducted in the fall after nesting.

Successfully managing barrens and savannah communities with prescribed fire and mowing treatments generally maintains and bolsters populations of at-risk and listed species described above (and listed in Section 4.2.3) that are characteristic of early successional plant communities in the GLA, including the State-listed frosted elfin and Persius duskywing (see Section 5.4, below). In the Albany Pine Bush, populations of several at-risk species, including eastern hognose snake and inland barrens buckmoth, appear to increase in areas managed with prescribed fire. Using these management techniques may also arrest the decline of certain species by maintaining appropriate habitat; the absence of wildland fire in inland pitch pine scrub oak barrens and oak-pine savannah reduces the viability of these plant communities and their ability to support characteristic and at-risk species.

Although all alternatives will have similar effects, these will likely be realized the most expeditiously and on more properties under Alternative A and the most slowly under Alternative B.

5.3 Federally-listed Species

5.3.1 Karner blue butterfly

A detailed description of effects of the proposed action on the Karner blue butterfly is provided in the biological opinion prepared under section 7 of the ESA and incorporated in this EA by reference. All of the potential management actions described above should provide significant benefits to the Karner blue butterfly by enhancing or maintaining suitable Karner blue butterfly habitat. While management efforts at sites occupied by Karner blue butterflies may result in some take of individual butterflies (egg, larvae, pupae, or adult) or temporary short-term degradation of habitat, the overall benefits of the above-described actions outweigh these potential adverse impacts. In addition, TNC, the NYSDEC, and the Service have developed conservation measures to minimize potentially negative management effects on Karner blue butterflies and frosted elfins (*e.g.*, conducting activities during certain times of the year, minimizing disturbance to occupied habitat) that will be included as permit conditions. By offering assurances that landowners can return their properties to baseline in the future and streamlining the documentation of these assurances, Alternative A, the Proposed Action, is likely to result in the most benefits to Karner blue butterflies, while these benefits are likely to be more delayed and occur on the smallest scale under Alternative B.

5.3.2 Indiana bat

Based on our current understanding of Indiana bats in New York, we do not anticipate any effects to Indiana bats under any of the alternatives. Within the vicinity of the GLA, there are

few wintering Indiana bats; therefore, the likelihood of encountering a maternity colony is quite low. In addition, the vast majority of trees proposed for removal have smooth bark (*e.g.*, aspen, young black locust), which does not provide roosting sites for Indiana bats. As we continue to learn more about Indiana bats in the GLA, we will incorporate any conservation measures identified to avoid potential adverse effects to this species.

5.4 New York State-listed butterflies

A description of effects of the proposed action on the State-endangered Persius duskywing and State-threatened frosted elfin butterflies is provided in the conference opinion prepared under section 7 of the ESA and incorporated in this EA by reference. In general, consequences of the Proposed Action will have effects on Persius duskywing and frosted elfin parallel to those anticipated for Karner blue butterfly and described above in Section 5.3.1 of this EA.

5.5 Land Use

We anticipate future habitat restoration projects will have little or no effect on land use. It is unlikely that any prime or unique farmlands would be impacted by the proposed action. Ecologically critical areas may be located near some of the proposed project areas, but would not be negatively affected.

5.6 Cultural Resources

Procedures for review under Section 106 of the National Historic Preservation Act and Section 14.09 of the New York State Historic Preservation Act, as provided in Appendix B of this EA, will avoid impacts to cultural resources. Avoidance of such impacts would also be assured under other alternatives. Implementation of these procedures, via incorporation into the ESP, will also fulfill the Regional Director's responsibilities under 36 CFR 800.2(a).

5.7 Local Socio-economic Conditions

Because the actions to be implemented under the Proposed Action will take place as a result of voluntary agreements by willing cooperators, will assure landowners rights to return their properties to baseline conditions upon termination of agreements, and will be dispersed over four counties, effects on local socio-economic conditions will likely be indiscernible. Similar *de minimus* effects would likely occur under Alternative C. Although habitat restoration on private lands under Alternative B would take place without assurances to landowners for future return of their properties to baseline conditions, the resultant slower pace of habitat restoration and smaller scale of implementation would also lead to imperceptible socio-economic impacts.

5.8 Environmental Justice

Environmental justice is achieved when everyone, regardless of race, culture, or income, enjoys the same degree of protection from environmental and health hazards and equal access to a healthy environment to live, work, and play. None of the alternatives would have any environmental or socio-economic impacts on women, minority, ethnic, religious, or social

groups or the civil rights of any citizen of the United States. Potentially affected Native American Tribes will be consulted under Secretarial Order 3206. The only environmental health risk inherent in any of the alternatives is reactions to smoke from prescribed fire (discussed above); no prime farmland or rangeland would be adversely impacted.

5.9 Human Health and Safety

As discussed in Section 4.5, we do not anticipate any impacts to human health and safety from activities associated with any of the alternatives. While prescribed burns may have the highest potential to effect human health and safety out of all the likely habitat management activities, this is not anticipated given the strict requirements under which prescribed burns must follow.

5.10 Cumulative Impacts

Early-successional pine barrens and oak savannah communities have experienced significant degradation, loss, and fragmentation since European settlement of the GLA. The sandy soils found in these communities provide ideal sites for human development. Development pressures are expected to continue to increase along the Interstate 87 corridor between Albany and Warren Counties. Fire suppression has also increased in areas with intensive human development. While the APBPC prescribed fire program has successfully expanded over the past several years, alternative forms of management are required at many Karner blue butterfly and frosted elfin sites.

These conditions have led to the decline and isolation of many remaining Karner blue butterfly populations. Karner blue butterfly recovery efforts will need to include expansion of existing sites, restoration of additional sites, and increased connectivity among sites. All alternatives considered in this EA seek to redress loss of early successional Karner blue butterfly habitats, but these benefits and attendant environmental consequences are likely to occur more promptly and on more lands under Alternative A, and most slowly and on the least acres under Alternative B.

6.0 Future NEPA Analyses

Should the preferred alternative be selected, there will likely be multiple individual landowner agreements entered into by TNC or their designees, each of which will involve various management activities. We anticipate that activities conducted under individual agreements will be categorically excluded from further NEPA analysis unless they result in any extraordinary circumstances (43 CFR 46.215). If the Service lists the frosted elfin and/or Persius duskywing under the ESA and TNC seeks to amend the SHA and ESP, NEPA compliance will be necessary. In that event, we will consider this EA, and any new information, in determining whether and what additional documentation will be required.

7.0 List of Preparers

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8.0 Consultation/Coordination with the Public and Others

During the preparation of this EA, consultation and coordination occurred among the New York Ecological Services Field Office, the Green Bay Ecological Services Field Office, the Service's Northeast Regional Office, the Northeast Regional Office of the Solicitor, and the New York State Department of Environmental Conservation. Consultation pursuant to section 7 of the ESA has been completed concurrently with the finalization of this EA.

A public comment period on a draft version of the SHA and this EA was announced in the *Federal Register* on October 10, 2007. Two responses were received. One commenter expressed opposition to the proposed action based on generalized dislike of The Nature Conservancy. The second commenter offered suggestions regarding survey guidelines in the draft SHA that were considered and incorporated, in part, into the final SHA.

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Appendix A. GLACIAL LAKE ALBANY COMMUNITIES AND PLANT AND ANIMAL SPECIES TRACKED BY NEW YORK NATURAL HERITAGE PROGRAM

SCIENTIFIC NAME	COMMON NAME	GROUP	NYS LISTING	FEDERAL LISTING	STATE RANK	GLOBAL RANK
Lycaeides melissa samuelis	Karner Blue	Invertebrate Animal	Endangered	Endangered	S1	G5T2
Erynnis martialis	Mottled Duskywing	Invertebrate Animal	Special Concern		S1S2	G3G4
Atrytonopsis hianna	Dusted Skipper	Invertebrate Animal			S3	G4G5
Itame sp. 1	Barrens Itame	Invertebrate Animal			S1	G3G4
Zanclognatha martha	Pine Barrens Zanclognatha	Invertebrate Animal			S1S2	G4
Cerma cora	Bird Dropping Moth	Invertebrate Animal			S1S3	G3G4
Papaipema sp. 2	Ostrich Fern Borer Moth	Invertebrate Animal			S1?	G3G4
Chaetaglaea cerata	A Noctuid Moth	Invertebrate Animal			S1S2	G3G4

Malaxis bayardii	Bayard's Adder's-mouth Orchid	Vascular Plant	Endangered		S1	G2
Hedeoma hispida	Mock-pennyroyal	Vascular Plant	Threatened		S2S3	G5
Pitch pine-oak forest	Pitch Pine-Oak Forest	Community			S4	G4G5

SCIENTIFIC NAME	**COMMON NAME**	**GROUP**	**NYS LISTING**	**FEDERAL LISTING**	**STATE RANK**	**GLOBAL RANK**
Podilymbus podiceps	Pied-billed Grebe	Vertebrate Animal	Threatened		S3B,S1N	G5
Rallus elegans	King Rail	Vertebrate Animal	Threatened		S1B	G4
Haliaeetus leucocephalus	Bald Eagle	Vertebrate Animal	Threatened	Threatened, Proposed for Delisting	S2S3B,S2N	G4
Tyto alba	Barn Owl	Vertebrate Animal			S3	G5
Asio flammeus	Short-eared Owl (wintering)	Vertebrate Animal	Endangered		S2	G5

Ammodramus henslowii	Henslow's Sparrow	Vertebrate Animal	Threatened		S3B,SNAN	G4
Asterocampa clyton	Tawny Emperor	Invertebrate Animal			S3	G5

SCIENTIFIC NAME	COMMON NAME	GROUP	NYS LISTING	FEDERAL LISTING	STATE RANK	GLOBAL RANK
Oligoneuron rigidum var. *rigidum*	Stiff-leaf Goldenrod	Vascular Plant	Threatened		S2	G5T5
Callitriche terrestris	Terrestrial Starwort	Vascular Plant	Threatened		S2S3	G5
Corydalis aurea	Golden Corydalis	Vascular Plant	Threatened		S2	G5
Blephilia ciliata	Downy Wood-mint	Vascular Plant	Endangered		S1	G5
Hydrastis canadensis	Golden-seal	Vascular Plant	Threatened		S2	G4
Carex backii	Back's Sedge	Vascular Plant	Threatened		S2	G4

Carex merritt-fernaldii	Fernald's Sedge	Vascular Plant	Threatened	S2S3	G5
Carex scirpoidea	Canadian Single-spike Sedge	Vascular Plant	Endangered	S1	G5
Bouteloua curtipendula var. *curtipendula*	Side-oats Grama	Vascular Plant	Endangered	S1	G5T5
Panicum flexile	Wiry Panic Grass	Vascular Plant	Threatened	S2	G5
Scheuchzeria palustris	Pod Grass	Vascular Plant	Rare	S3	G5
Pellaea glabella ssp. glabella	Smooth Cliff Brake	Vascular Plant	Threatened	S2	G5T5
Lycopodiella caroliniana var. *caroliniana*	Carolina Clubmoss	Vascular Plant	Endangered	S1	G5T4
Scorpidium scorpioides	a moss	Nonvascular Plant		S1S2	G4G5

SCIENTIFIC NAME	COMMON NAME	GROUP	STATE RANK	GLOBAL RANK
Red maple-hardwood swamp	Red Maple-Hardwood Swamp	Community	S4S5	G5
Vernal pool	Vernal Pool	Community	S3S4	G4
Northern white cedar swamp	Northern White Cedar Swamp	Community	S2S3	G4
Black spruce-tamarack bog	Black Spruce-Tamarack Bog	Community	S3	G4G5
Shrub swamp	Shrub Swamp	Community	S5	G5
Marl fen	Marl Fen	Community	S1	G2G3
Medium fen	Medium Fen	Community	S2S3	G3G4
Dwarf shrub bog	Dwarf Shrub Bog	Community	S3	G4
Limestone woodland	Limestone Woodland	Community	S2S3	G3G4
Shale talus slope woodland	Shale Talus Slope Woodland	Community	S3	G3G4
Red cedar rocky summit	Red Cedar Rocky Summit	Community	S3	G3G4

Maple-basswood rich mesic forest	Maple-Basswood Rich Mesic Forest	Community	S3	G4
Calcareous shoreline outcrop	Calcareous Shoreline Outcrop	Community	S2	G3G4
Shale cliff and talus community	Shale Cliff and Talus Community	Community	S3	G4
Successional fern meadow	Successional Fern Meadow	Community	S3S4	G4

Appendix B. Procedures for compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470) and Section 14.09 of the New York State Historic Preservation Act of 1980.

These following procedures will be incorporated into the U.S. Fish and Wildlife Service (Service) Enhancement of Survival Permit.

For every project (undertaking) involving land acquisition, ground disturbance, or buildings and structures 50 years and older:

1. The Nature Conservancy, or their designee, is authorized to consult with the State Historic Preservation Officer (HPO) as agent for the Service for the specific project (undertaking) for the purpose of identifying cultural resources in the area of potential effect and obtain from the HPO a determination of no historic properties or no effect on historic properties;

2. Prior to entering into each landowner agreement, The Nature Conservancy, or their designee, will:

   - allow the State HPO at least 30 calendar days to respond to requests for a determination of historic property presence,
   - provide appropriate public and local government notification of the project,
   - notify appropriate Indian tribes about the project,
   - provide the Regional HPO with sufficient documentation to determine if the Section 106 process is completed before the project is implemented, and
   - provide the Service with copies of the HPO letters of no historic properties or no effect on historic properties before the project commences;

3. In the event the State HPO fails to respond appropriately after 30 calendar working days, the Service will take over the Section 106 process; and

4. If evaluation of cultural resources for being eligible for the National Register of Historic Places is needed, or if properties on or eligible for the National Register could be affected by the project, the Service will take over the Section 106 process.

FINDING OF NO SIGNIFICANT IMPACT

Proposed Issuance of an Enhancement of Survival Permit
Associated with Implementation of a Safe Harbor Program
for the Benefit of the Karner Blue Butterfly
for a 30-year Period Beginning on/about

April 29, 2010

Permit Issued
to
The Nature Conservancy, Eastern New York Chapter

The U.S. Fish and Wildlife Service (Service) proposes to issue an Enhancement of Survival Permit (ESP) to The Nature Conservancy, Eastern New York Chapter (TNC), in association with the implementation of a Safe Harbor Program and application for take of the endangered Karner blue butterfly resulting from otherwise lawful private activities in portions of Albany, Saratoga, Schenectady, and Warren Counties, New York.

The Service prepared an Environmental Assessment (EA) which considered two other alternatives and the proposed issuance of the ESP for a programmatic Safe Harbor Agreement (SHA) to TNC (the proposed alternative). The alternatives of continuing ongoing conservation measures without issuing any permits associated with SHAs (Alternative B; No Action) and developing individual SHAs directly with non-Federal landowners (Alternative C) would not provide timely incentives to private landowners to manage for either existing or future Karner blue butterfly populations. In the development of the EA, the Service identified one other alternative that was dismissed because it was not considered appropriate for detailed analysis.

The environmental consequences of the proposed action will be restoration and maintenance of lupine habitats and the attendant open-canopy pitch pine and scrub oak barrens and pine-oak savannahs required by Karner blue butterflies, as well as by two other butterfly species, frosted elfin and Persius duskywing that are listed by the State of New York. These habitats have been greatly diminished due to development and due to exclusion of fire and other natural sources of disturbance. All actions will be implemented on the properties of willing landowners who will retain the right to return their properties to baseline conditions upon termination of agreements under the SHA. Environmental consequences anticipated under the alternatives would be similar in type, but the lack of assurances for landowners under the No Action alternative means that the consequences will be realized on a much smaller area of land and over a much longer period of time. Similarly, development of SHAs with individual landowners will require substantially more time, place a greater administrative burden on landowners, and ultimately result in less habitat restoration.

A Notice of Availability for the draft SHA application and draft EA were published in the *Federal Register* on October 10, 2007. Two comments were received. One comment opposed issuance of the permit based on unspecific aversion to TNC. Suggestions from the second

commenter regarding survey guidelines in the draft SHA were considered and incorporated, in part, into the final SHA.

Implementation of the proposed alternative is expected to result in a net benefit and conservation of the Karner blue butterfly on private lands while meeting the needs of the affected landowners. Based on the assessment conducted by the Service, it has been determined that issuance of the ESP would not have significant effects on the human environment in the project area. The issuance will comply with applicable Federal and State laws, Executive Orders, and existing guidelines and regulations. Copies of this document and the documents developed in support of this proposal are available for review from the Service upon request.

Based on review and evaluation of these factors, and the supporting references listed below, the Service has determined that the issuance of a section 10(a)(10)(A) ESP to TNC is not a major Federal action that would significantly affect the quality of the human environment within the meaning of section 102(2)(C) of the National Environmental Policy Act of 1969. Accordingly, the preparation of an Environmental Impact Statement is not required.

Supporting references are provided in the Service's Environmental Assessment, Biological Opinion, and other aspects of the administrative record on this action.

5/6/10

Acting Marvin Moriarty
Regional Director

Date